

FIRST HILL DISTRICT ENERGY STRATEGIC PARTNERSHIP

January 24, 2012

Seattle City Council – Energy and Environment Committee

1. Background

- Review of previous work on district energy
- Summary of First Hill opportunity
- Key lessons from DE systems in other cities

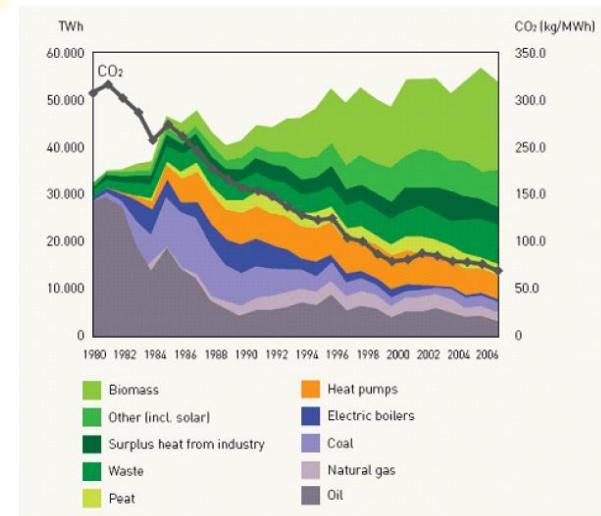
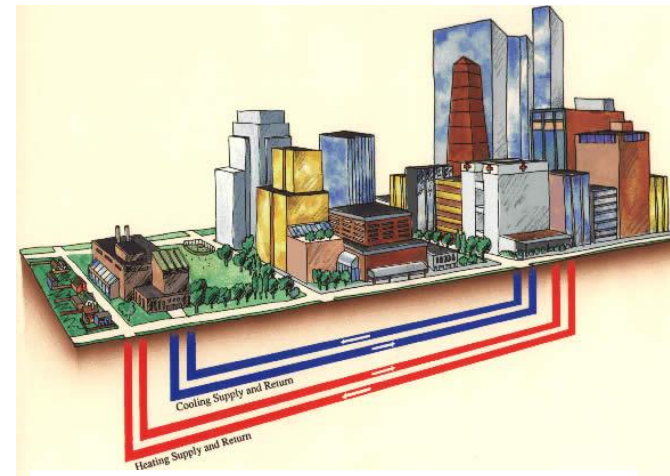
Seattle's Interest in District Energy

□ Environmental benefits

- Efficiency in the system
- Opportunity for low-carbon fuel sources to replace fossil fuels
- Economies of scale make more local renewable fuel sources possible

□ Economic benefits

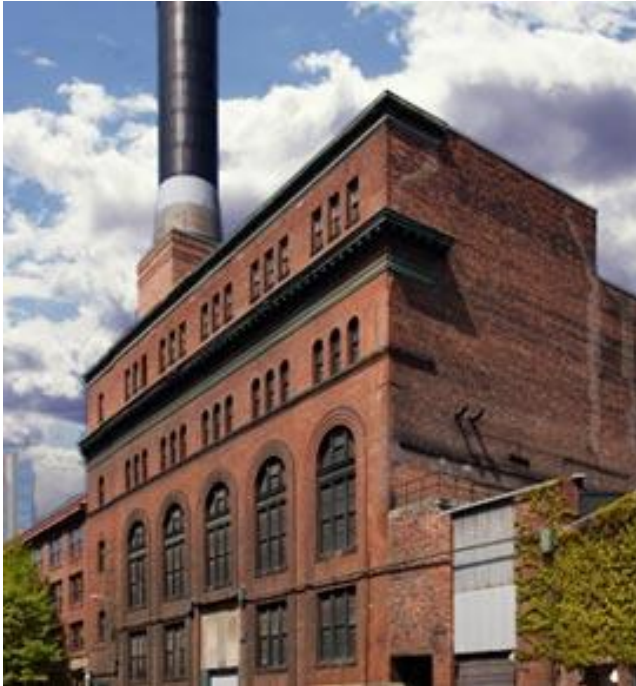
- Through local energy capture and production



Source: Swedish Energy Agency

Our History with District Energy is One of . . .

legacy systems and . . .



. . . missed opportunities



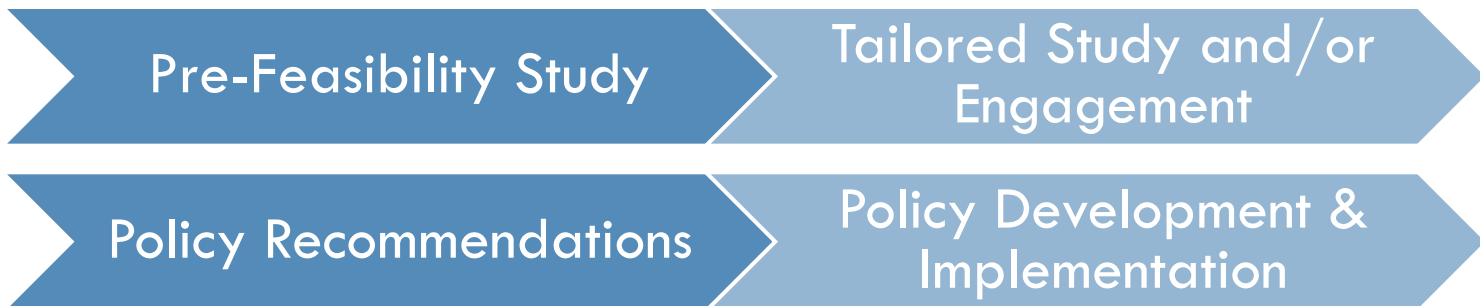
Key lessons from DE systems in other cities

- District energy systems:
 - ▣ Are as reliable as on-site systems
 - ▣ Have cost effective, stable rates over time
 - ▣ Provide the opportunity to move to greener energy sources over time
- Important to have local leadership with a long-term vision (but vision needs to be flexible to take advantage of new technologies, energy sources)
- Even with Seattle's energy prices, district systems can be cost competitive.

Pre-Feasibility Study in 2011

□ Two-Pronged Approach

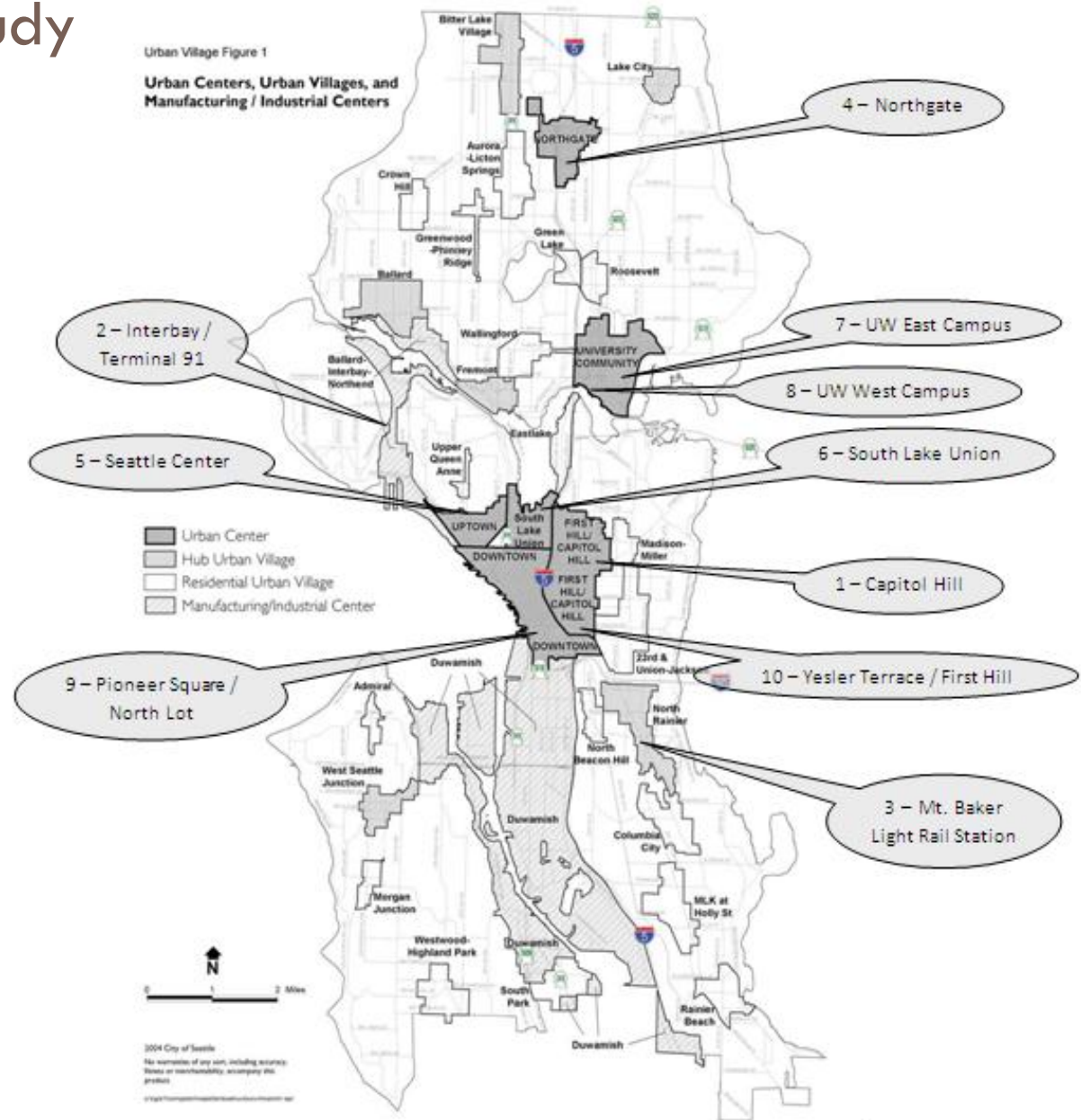
1. Identify areas with a high potential for district energy
2. Develop strategies and policies to encourage district energy



Pre-Feasibility Study

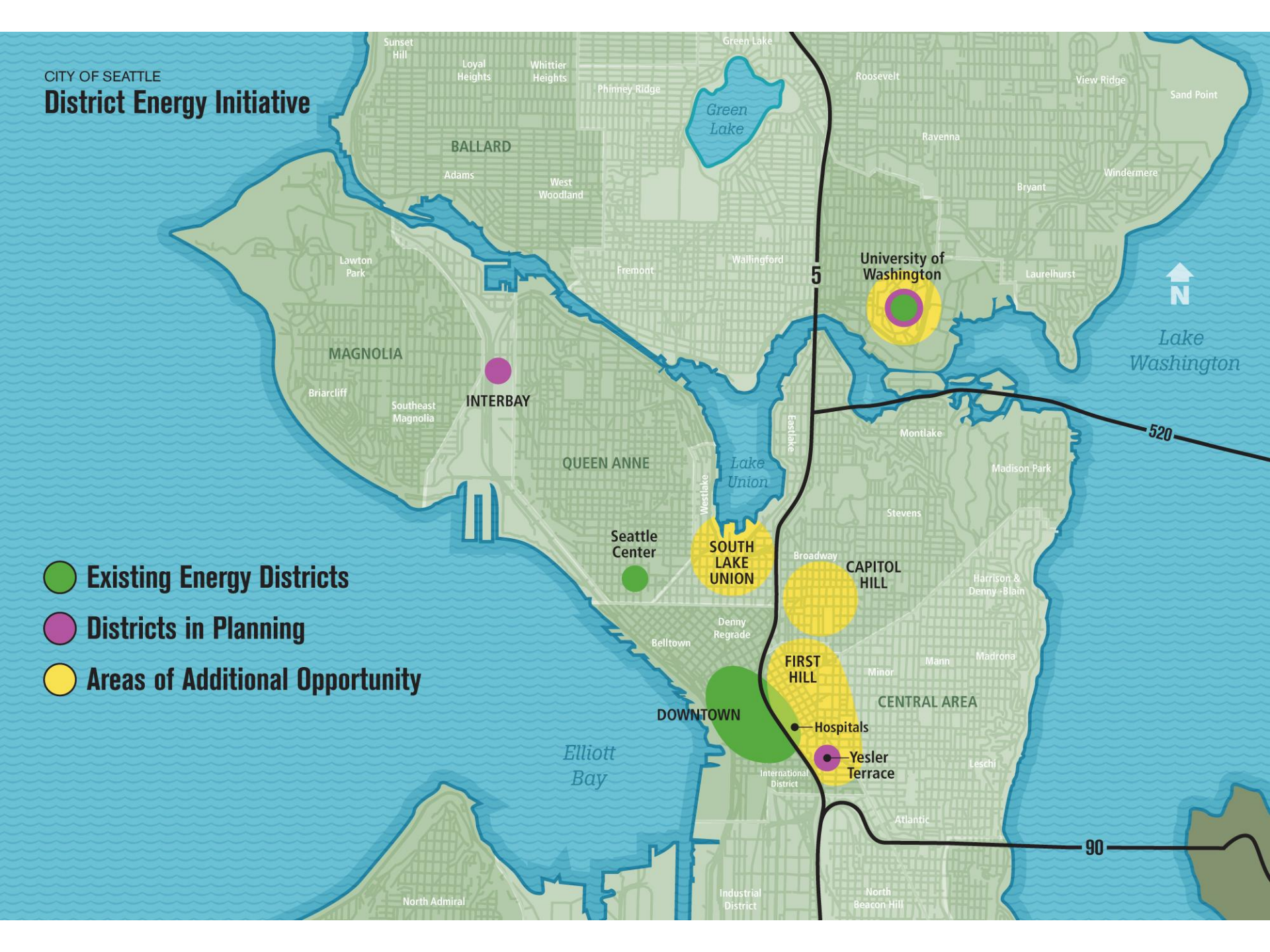
Studied feasibility based on:

- Current and future thermal load
- Hydronic heating is not precluded
- Nearby thermal source identified
- Identified both the potential for district energy and the likely timing of its development



CITY OF SEATTLE
District Energy Initiative

- Existing Energy Districts
- Districts in Planning
- Areas of Additional Opportunity

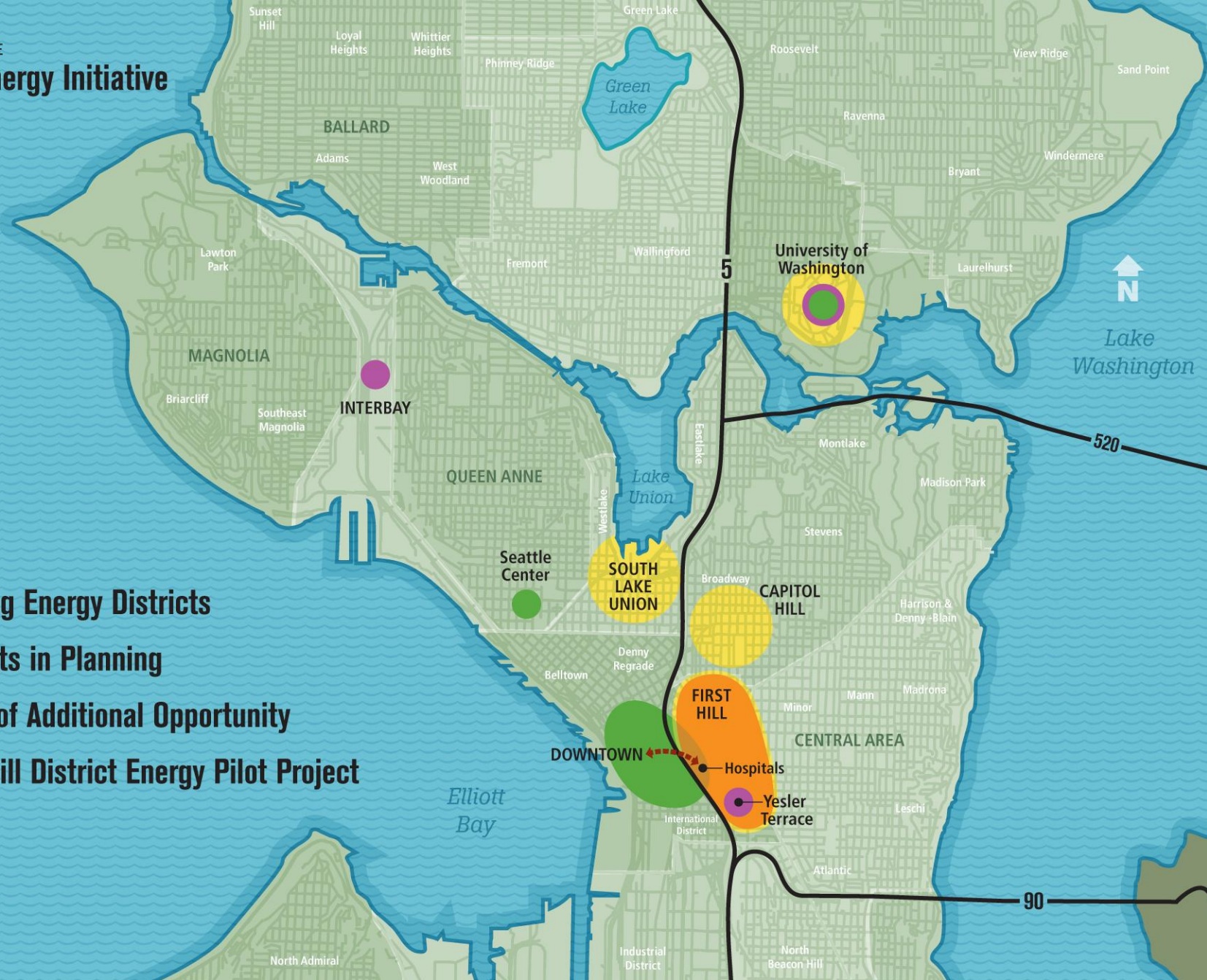


Pre-Feasibility Study Recommendations

1. Strategic DE Partnership Starting with First Hill
 - Opportunity to leverage Yesler Terrace redevelopment, hospital thermal loads, and Seattle Steam infrastructure
2. Additional Feasibility Work on Other Promising Neighborhoods
 - Capitol Hill, South Lake Union, University District

CITY OF SEATTLE
District Energy Initiative

- Existing Energy Districts
- Districts in Planning
- Areas of Additional Opportunity
- First Hill District Energy Pilot Project



First Hill District Energy Pilot

□ Challenges

- SHA not interested in owning/operating DE system
- City also not interested
- Aging steam infrastructure
- Seattle Steam capital constraints

□ Opportunities

- Synergies of current and future heat load
- Phased upgrade of steam system
- Future Yesler Terrace DE system
- Potential for future DE expansion beyond First Hill

2. Analysis of Options for First Hill DE

- Analysis of Alternatives
- Legal / Regulatory Framework
- Carbon Analysis of Multiple Scenarios

Analysis of District Energy Alternatives

□ Alternative 1: Take No Further Action

- No change from current course

□ Alternative 2: Stand-Alone System at Yesler Terrace

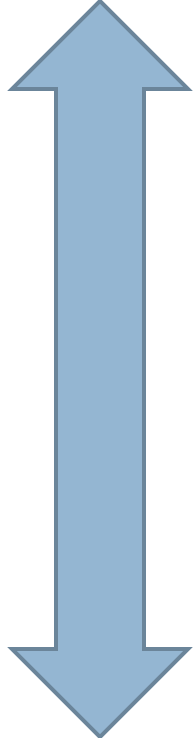
- Outcome of feasibility analysis could still result in this strategy
- Stand-alone system does not capture greater community opportunities or synergies with nearby loads (e.g. hospitals)

□ Alternative 3: Municipal Heating District

- Feasibility analysis does not preclude this. This is one of many legal structures the feasibility analysis will consider to achieve desired objectives.

Legal / Regulatory Framework

More
Proactive



More
Passive

100% Public Ownership

- Municipal Owned/Operated

Hybrid Public/Private – Public Ownership

- Public Ownership w/Concession

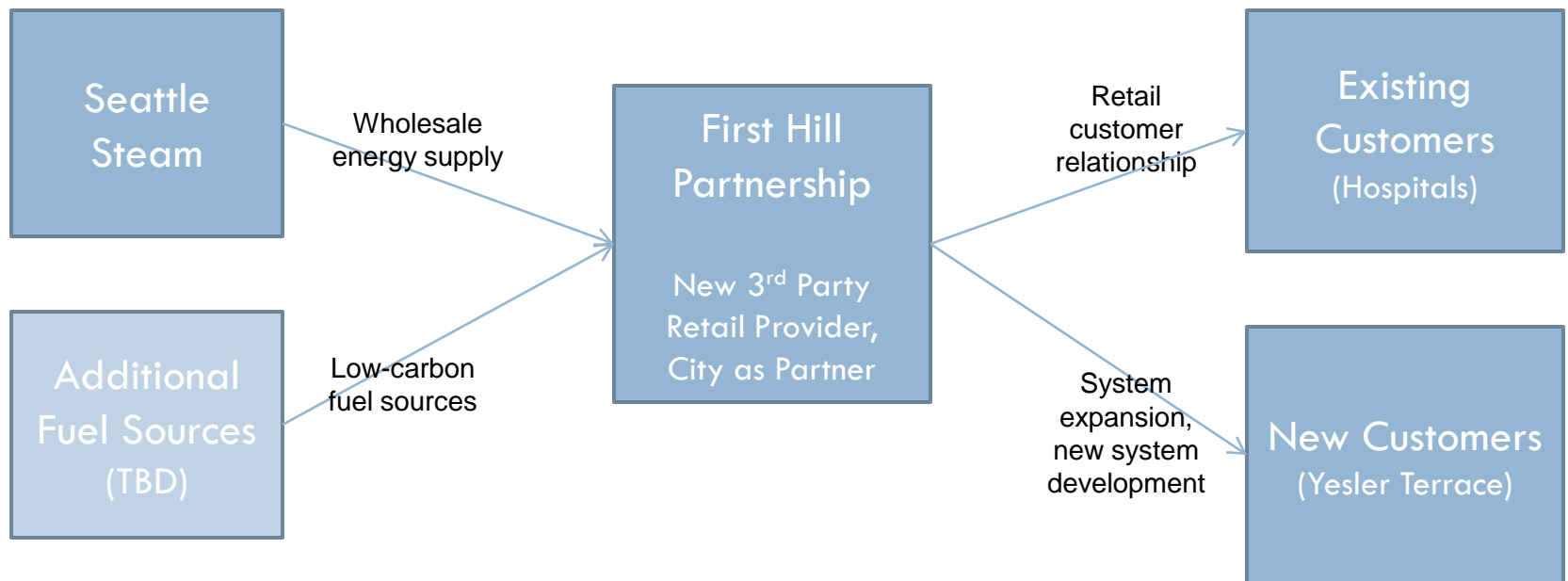
Hybrid Public/Private – Shared Risk

- Joint Venture
- Split Assets

100% Private Ownership

- Joint Cooperative Agreement
- Franchise Agreement

First Hill Strategic Partnership – One Concept



3. RFQ for Partner for First Hill DE Analysis

- Request for Qualifications (Attachment A)
- Resolution 31354 Support First Hill Partnership

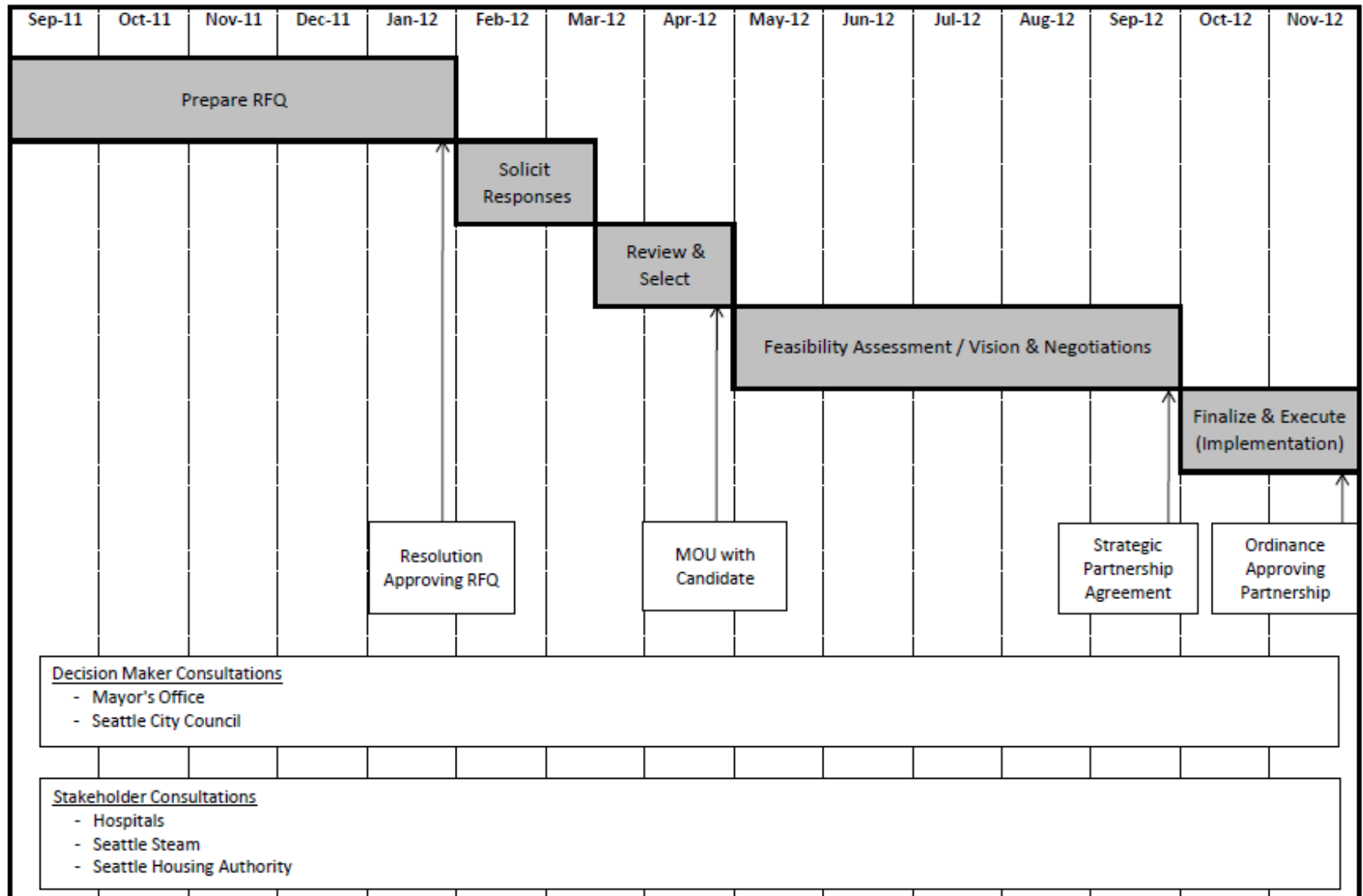
Request for Qualifications

- Solicits a private sector district energy provider feasibility analysis on First Hill
- Analysis will:
 - Consider multiple scenarios
 - Be coordinated among City, SHA, Hospitals, and Seattle Steam
 - Presume private equity/financing for system development

First Hill Strategic Partnership - Objectives

- Reliability
- Cost-effective, stable pricing
- Leverage existing infrastructure
- Low-carbon fuels
- Modern, flexible, adaptable infrastructure
- Local economic development
- Maximize other community benefits, minimize community impacts

First Hill RFQ Timeline



City's Role in Partnership



- Coordinate interests and perspectives
- Support common DE vision
- Ensure community objectives for GHG and other outcomes
- Support modernization and expansion of DE
- Increase transparency
- No initial ownership or equity role
- DE conditions in Yesler Terrace planned action ordinance

Resolution 31354

“A RESOLUTION establishing the City’s intent to seek a private sector partner to assist it in exploring possible models for expanding, upgrading, and/or developing district energy systems in certain areas of Seattle”

- *Supports exploring First Hill opportunities for district energy*
- *Supports issuing an RFQ for a private district energy provider*
- *Recognizes we will work with First Hill partners in this effort*



Questions?